

# PATENT SPECIFICATION

DRAWINGS ATTACHED

**L.176.175**

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## COMPLETE SPECIFICATION

### Improvements in or relating to Securing Means

I, JACQUES VICTOR LASMARIGUES, a French citizen of Pessat-Villeneuve par Riom (Puy-de-Dôme), France, do hereby declare the invention, for which I pray that a patent may be granted to me, and the method by which it is to be performed, to be particularly described in and by the following statement:—

The present invention relates to means for fixing together with two parts in assembled relationship.

Said means find their use in numerous cases; from the number of possible applications of the invention, mention will be made, simply by way of example, of the assembling of two parts of a piece of furniture, whatever the material of which the furniture is made.

It is an object of the invention to provide securing means for the purposes referred to which are easily associated with disassociated so that the elements may be assembled and disassembled readily and quickly.

To this end, the invention includes means for fixing together two parts in assembled relationship and according to the present invention comprises two relatively movable members adapted respectively to be mounted on the parts to be fixed together, of which one member has an end flange extending from its base from which also extends in the longitudinal direction an L-shaped element, the foot of which remote from the base is formed with an inner clamping surface opposite to the base and divergent with respect thereto in the direction away from the limb of the element joined to the base, and the second member of which is also formed with an end flange and is formed with at least one opening adapted to permit passage of the aforesaid foot formed with an inner clamping surface, and relative longitudinal movement between the two members through the operation of suitable means is adapted to effect jamming of the inner clamping surface of the L-shaped element against the second

member and thereby clamping to one another of the said parts to be fixed together without relative movement of the parts.

The invention also includes a structure, for example, an article of furniture, comprising parts secured together or arranged to be secured together in assembled relationship by the said fixing means.

In order that the invention may be more clearly understood, reference will now be made to the accompanying drawings which show some embodiments thereof, by way of example, and in which:—

Figure 1 is a plan view of the fixing or securing means associated with two panel sections,

Figure 2 is a sectional view along the line II—II of the fixing means shown in Figure 1, and

Figures 3 to 11 show various embodiments of constituent elements.

It is suitable first of all to refer more particularly to Figures 1 and 2, which show the means for fixing two members 1 and 2 at an angle of 90°, for example two panels of a piece of furniture.

After having made a suitable groove 3, a longitudinal support or member 4 is placed on the panel 1 within the groove, said member being fixed to the base of the groove 3 of the panel 1, for example, by means of three screws 5, 5', 5''.

The member 4 is fabricated e.g. by bending a stamped-out portion thereof so as to form an L-shaped male engaging element 6, the foot of which remote from the base has an inner clamping surface opposed to the base and divergent with respect thereto in the direction away from the other limb. One of the ends of this member 4 is folded back so as to form a flange 7, apertured as shown.

On the panel 2 there is fixed, by means, for example, of screws 5a, 5b, 5c, a U-shaped guide 9 whose limbs are directed towards the

panel 1 and are inwardly flanged at their extremities. Inside guide 9 there slides a second longitudinal support or member 10, constituting a locking support, held in the position shown by cylindrical studs, T, T', T'', fixed on each of the limbs of the guide 9. The member 10 is bent over at one of its ends to form a flange provided with a threaded hole 12. The member 10 is cut at a suitable point so as to form a slot or a recess 13 into which the L-shaped male engaging element 6 of the member 4 engages.

The assembling and fixing of the two panels is effected in the following manner:

The member 10 is introduced into the U-shaped guide 9 secured to the panel 2 and is made to slide so that its end remote from the flange 11 reaches the end of the guide 9 as shown in Figure 2. Then, the panel 1 is placed perpendicular to the panel 2, the member 4 provided with the engaging element 6 having been previously fixed to said panel 1.

It is then sufficient to introduce the assembly constituted by the guide 9 and member 10 into the groove 3, this determining the alignment of the member 4 and the member 10, the element 6 passing into the recess 13 and the flange 7 of the member 4 covering the end of the U-shaped guide 9.

After this, a screw 8 is introduced through the aperture of the flange 7 and is engaged in the threaded hole 12 of the member 10. By tightening the screw 8, the member 10 is given a longitudinal movement of translation in the direction of the arrow F, this causing the element 6 projecting through the recess 13 in member 10 to jam at its inner clamping surface against the member 10 at an end of the recess 13.

As the member 4 is secured to the panel 1 and as member 10 is secured to panel 2, the two panels are securely locked together.

The member 4 and the guide 9 may be of substantially the same length as the panels to be fixed. However, if desired, a member and guide of predetermined lengths different from that of the panels may be used; for example, for fixing panels of large dimensions, several guides and pairs of relatively longitudinally movable members can be placed end to end.

The cross-sectional shape of the U-shaped guide 9 needs no modification, but different embodiments of members for obtaining extension of the range of clamping by utilising a plurality of first and second members of which the second members are connected together are shown in Figures 3 to 8 and 11.

Figures 3 and 4 show in section and in plan view respectively, a member 10 in which a slot 13 has been made and which has a flat part 14 provided with an aperture used for effecting coupling to another member.

Figure 5 shows an extension member 10' with a slot 13. This member can be secured at 15 to the end 14 of the member 10 shown in Figure 3.

For fixing panels of large dimensions, it would be convenient to place a plurality of members identical to member 10' end to end until the desired length is obtained.

Figures 6 and 7 show in section and in plan view a member 4 and its element 6 the latter being formed by bending out a stamped-out portion of the member 4.

Figure 8 shows in elevation an extension member 4' for cooperating with an extension member 10'.

Figures 9 and 10 show in section and in plan view a U-shaped guide 9 in accordance with the invention.

Figure 11 is a plan view of an intermediate link intended for ensuring the connection of adjacent members 10, 10' or 10', 10' in the case of assembling panels of large length.

Thus, the object of the invention is fulfilled by the specific arrangements described.

#### WHAT I CLAIM IS:—

1. Means for fixing together two parts in assembled relationship, comprising two relatively longitudinally movable members adapted respectively to be mounted on the parts to be fixed together, of which one member has an end flange extending from its base from which also extends in the longitudinal direction an L-shaped element, the foot of which remote from the base is formed with an inner clamping surface opposite the base and divergent with respect thereto in the direction away from the limb of the element that is joined to the base, and the second member of which is also formed with an end flange and is formed with at least one opening adapted to permit passage of the aforesaid foot formed with an inner clamping surface, and relative longitudinal movement between the two members through the operation of suitable means is adapted to effect jamming of the inner clamping surface of the L-shaped element against the second member and thereby clamping to one another of the said parts to be fixed together without relative movement of the parts.

2. Means for fixing together two parts according to claim 1, comprising a screw whose rotation causes the relative longitudinal movement of the two members, by free rotation in a hole in the flange of the first of the said members and action on the second member through engagement with a threaded hole in that member.

3. Means for fixing together two parts according to claim 1 or claim 2, wherein the L-shaped element is an integral part of the first member and is formed by bending.

4. Means for fixing together two parts according to any preceding claim, wherein the

- second member is slidable in a U-shaped guide and positioned between appropriate studs fixed on the limbs of the U-shaped guide and inwardly directed flanges on the said limbs. 5
5. Means for connecting together two parts in assembled relationship substantially as hereinbefore described with reference to Figures 1, 2, 6, 7, 9 and 10 of the accompanying drawings. 10
6. Means as claimed in claim 5, but with the modification shown by Figures 3 and 4 either alone or with extension means as described with reference to Figures 5 and 8 or Figures 5, 8 and 11. 15
7. A structure, for example, an article of furniture, comprising parts secured together or arranged to be secured together in assembled relationship by means as claimed in any preceding claim. 20

BARRON & WARREN,  
16, Kensington Square,  
London, W. 8.  
Chartered Patent Agents.

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